

## APPENDIX E

### EXAMPLES OF MINOR ISSUES

This guidance applies to thresholds for documenting findings and violations in Inspection Manual Chapter 0612. Although the following examples are all violations of requirements, ROP issues not associated with requirements should be considered minor if the issue is similar to the example guidance.

Minor issues and violations, are below the significance of that associated with green SDP findings and are not the subject of formal enforcement action or documentation. Failures to implement requirements that have insignificant safety or regulatory impact or issues that have no more than minimal risk should normally be categorized as minor. While licensees must correct minor violations, minor violations or other minor findings **do not normally warrant documentation** in inspection reports or inspection records and **do not warrant enforcement action**.

NRC Inspection Manual Chapter 0612 Appendix B, "Issue Screening," provides guidance for determining if a finding should be documented and whether the finding can be analyzed using an SDP. When determining whether identified issues can be considered minor, inspectors should compare the issue to the following examples.

In all cases, minor issues should meet the following criteria:

- have no actual safety consequences,
- have little to no potential to impact safety,
- have no impact on the regulatory process, and
- not involve willfulness.

The examples in this appendix describe issues and explain how to determine whether or not the issue is minor. In all cases, this determination is based on the judgement of the inspector who identified the issue and the regional management involved and will depend on the circumstances of the particular issue.

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## 1. Record Keeping Issues

**Example a. Post-maintenance testing was performed on ten glycol air handling units during an outage of a Westinghouse ice condenser facility. All the required tests were performed, based on statements from licensee workers, but there was no record that an actual air flow test was conducted on two of the units. Based on indication in the control room, both air handling units had comparable air flow to those that had documented test results, and the ice condenser technical specification required air temperatures were all well-within specification.**

The violation: 10 CFR 50, Appendix B, Criterion XI or the licensee's procedures require test results to be documented and evaluated to assure that test requirements are satisfied.

Minor because: This was a record keeping issue of low significance. There was reasonable assurance that test requirements were met as evidenced by actual air flow being satisfactory and technical specification temperatures being within limits.

Not minor if: The air flow was determined to be degraded during subsequent testing.

**Example b. In a records storage vault, the licensee observes a ceiling leak. Temporary containers were used to collect water during rainstorms. This "work around" continued for a year. However, the containers overflowed during a heavy weekend rainstorm when no one was available to monitor the containers and some safety-related records were damaged, but were still readable.**

The violation: The licensee failure to correct the water intrusion problem in a prompt manner which resulted in damage to records violated the 10 CFR 50.71 requirement to maintain certain records.

Minor because: This was a failure to implement a corrective action that had no safety impact because no records were lost.

Not minor if: Required records were irretrievably lost.

**Example c. The licensee's surveillance test records were not complete for a safety-related pump.**

The violation: The surveillance test is required by Technical Specifications.

Minor because: The surveillance test was performed, but not completely documented. The portion of the test documented and the last

completed surveillance test revealed that the equipment performed its' safety function.

Not minor if: The surveillance test was not performed or a subsequent test showed that the equipment would not perform some safety-related function.

**Example d. An inspector found that a licensee was missing area radiation survey records or weekly area contamination (smear) records.**

The violation: Area radiation surveys and contamination surveys are required by license conditions or 10 CFR 20.2103.

Minor because: The record of the survey is missing, but the survey was actually performed. No unexpected contamination or exposure resulted from the violation.

Not minor if: An unexpected contamination or exposure resulted from the violation.

**Example e. Inspectors identified that the licensee did not monitor the isolation function that is needed to mitigate a release of radioactive liquid and is provided by turbine building drainage system radiation monitors. The drainage system design included two flow paths to the facility heat sink reservoir. One path drained directly and the other through an oily waste separation system. These paths contained Process Radiation Monitors HFRT-45 and LERT-59 that provided alarm and automatic isolation of the flow paths.**

The violation: The Maintenance Rule requires that licensees shall monitor the performance or condition of SSCs against license established goals, in a manner sufficient to provide reasonable assurance that such SSCs are capable of fulfilling their intended function.

Minor because: This is a failure to implement the maintenance rule that had no equipment performance implications. The licensee's program regarding scoping of other non-safety related systems was otherwise satisfactory and the process radiation monitors were found to be functional.

Not minor if: The SSC could not perform its intended safety function and it's performance did not meet the established a(1) goals.

**Example f. The inspectors identified that the licensee failed to consider one maintenance preventable functional failure (MPFF) of a system component during their a(2) demonstration that preventive maintenance was being effective.**

The violation: The Maintenance Rule 10 CFR 50.65(a)(2) requires, in part, that monitoring as specified in (a)(1) is not required where it has been demonstrated that the performance or condition of an SSC is being effectively controlled through the performance of appropriate preventive maintenance, such that the SSC remains capable of performing its intended function. This demonstration did not consider the identified MPFF.

Minor because: When the additional MPFF was considered, the a(2) conclusion remained valid.

Not minor if: The a(2) demonstration became invalid as a result of this additional MPFF.

**Example g. The inspectors identified that during an (a)(3) evaluation, the licensee failed to include the system unavailability time during T/S required surveillance testing of the emergency diesel generators. Although the licensee conducts monthly EDG testing, the EDGs are unavailable to perform their intended safety function during T/S surveillance testing for a few minutes during each monthly test. The unavailability time due to surveillance testing was insignificant when compared against total unavailability such that the (a)(3) balancing was not affected.**

The violation: The licensee failed to consider all unavailability when conducting the (a)(3) evaluation.

Minor because: The small contribution to unavailability due to the surveillance testing is insignificant when compared to total unavailability.

Not minor if: The contribution to unavailability due to surveillance testing was significant enough to affect the balancing determination.

**Example h. The inspectors identified that the licensee had not scoped and thus failed to adequately demonstrate the performance or condition of functions for some components of the augmented off-gas system. Failure of these components could result in a plant transient or scram, but there are no known equipment performance problems.**

The violation: The SSCs were not scoped within the maintenance rule and if failures had occurred, they may have caused a transient or scram to an operating unit.

Minor because: This is a failure to implement a maintenance rule requirement that has no equipment performance implications. Had the SSCs been scoped, the routine maintenance being performed on the system was adequate and would have demonstrated effective maintenance per (a)(2) of the maintenance rule.

Not minor if: An actual failure had occurred causing a transient or if equipment performance problems were such that an (a)(2) demonstration could not be justified.

**Example i.** The inspectors identified that the licensee had not scoped and thus failed to adequately demonstrate the performance or condition of a pressurizer heater group power supply breaker. The pressurizer heaters are a non-safety related system used in the plant EOPs. The breaker failed to close during routine plant operations due to a random failure. As a result of the failure, the licensee realized that the breaker should have been scoped into the rule, and placed it into (a)(2) after reviewing its performance history and concluding that an adequate (a)(2) demonstration could be made based on the existing preventive maintenance on this type of breaker.

The violation: The breaker was not scoped within the maintenance rule.

Minor because: When scoped, the routine maintenance being performed on the breaker was adequate and its overall performance history demonstrated effective maintenance per (a)(2) of the maintenance rule.

Not minor if: Equipment performance problems were such that an (a)(2) demonstration could not be justified.

## **2. Licensee Administrative Requirement/Limit Issues**

**Example a.** While performing a review of a completed surveillance test, the system engineer determines that operators performing the test had made a calculation error when determining the leak rate of a power-operated relief valve's nitrogen accumulators. When calculated correctly, the actual check valve leakage exceeded the surveillance leakage rate's acceptance criterion in the surveillance procedures (but not the Technical specifications surveillance requirement). The surveillance had been completed a week earlier and the system had been returned to service. The allowable leakage rate was below that used in the design assumptions for sizing of the accumulators and it was determined that with the identified leakage, the valves would be able to perform the required number of strokes assumed in the accident analysis.

The violation: The Technical Specification surveillance test's allowable check valve leakage rates were exceeded and the system was returned to service.

Minor because: The limit exceeded was an administrative limit. Actual check valve leakage rates, based on testing history, have always been

significantly low enough to meet the required number of valve strokes.

Not minor if: Maintenance records indicated that historical check valve leakage rates were too high bringing the ability of the valves to meet the required number of valve strokes into question or Technical Specification limits were exceeded.

**Example b. NRC inspectors identified that a high radiation door was not locked as required by plant procedures. While the licensee's procedurally controlled administrative limit for area postings was exceeded, the door to the area was conservatively classified and did not exceed regulatory radiation levels to warrant posting as a locked high radiation area.**

The violation: Site procedures require activities to be accomplished in accordance with procedures.

Minor because: The requirement was a licensee administrative limit. The area was conservatively posted and no regulatory limits requiring posting were exceeded.

Not minor if: The area radiation levels exceeded the limits such that the area should have been a locked high radiation area or the radiation levels in the area were changing rapidly due to power changes or system operation such radiation levels at which the door would be required to be locked could be reached.

**Example c. During a refueling outage, the licensee tested a charging pump at full flow conditions as required every 18 months. Vibration data taken during this test indicated vibration of 0.324 inches per second (ips), which exceeded the test procedure Alert range of 0.320 ips. The procedure required the surveillance frequency to be increased to every nine months after exceeding the Alert range. The licensee failed to identify that the test result exceeded the Alert range, so the test frequency was not increased. Subsequent vibration testing revealed no further vibration degradation. The ASME Code acceptance criterion for vibration measurements was 0.325 ips.**

The violation: Criterion XI or the licensee's procedures require that test procedures shall incorporate acceptance limits established by design documents. Measured vibration data exceeded the test procedure alert levels and the additional testing was not performed.

Minor because: This limit was a licensee administrative limit. The ASME Code limit was not exceeded and there was no subsequent degradation of vibration of the pump.

Not minor if: Subsequent vibration tests revealed degradation into the action range, the same issue affected a number of pumps tested, or the issue was repetitive.

**Example d. The licensee missed an hourly update of a state agency during a declared Unusual Event.**

The violation: 10 CFR 50.54(q) requires that licensees follow their emergency plan and the plan committed the licensee to hourly updates of state agencies during declared emergencies.

Minor because: There is no regulatory requirement to make this update, there was no impact on public health and safety, and it did not detract significantly from the state agency's ability to function during the emergency.

Not minor if: There was a failure to make required initial notifications, a significant breakdown in communication functions committed to in the emergency plan, or a failure that affected the agency's ability to respond to the emergency.

**Example e. During an inspection of silicon foam penetration seals, an inspector noted that foam extrusion (3/8 inch) from repaired seals was less than the amount specified in the seal repair procedure (1/2 inch). However, the silicon foam vendor's instructions permit extrusions as little as 1/4 inch.**

The violation: The seal repair was not performed in accordance with the licensee's procedure.

Minor because: This is a violation of a licensee administrative requirement. Because the extrusions met the vendor's instruction's limits, no regulatory limit was violated.

Not minor if: Both the licensee and vendor procedures were violated such that the condition would have impacted the ability of the seal to perform its function.

**Example f. The licensee's procedure required that heat tracing be energized in the diesel fire pump room from September 30 to April 30. In December, an inspector observed that the heat tracing was de-energized. The room temperature was 68 degrees, maintained by the steam boiler (50 degrees was the minimum temperature for operations). The temperature of the room was monitored and annunciated in the control room. An annunciator response procedure instructs the operator to check heat tracing if the room temperature alarms were received. The inspector verified that the**

**temperature in the room had not dropped below 50 degrees since September 30.**

The violation: A licensee procedural requirement was not met.

Minor because: This is a failure to implement a procedural requirement that had no safety impact under the given situation. The temperature had not dropped below the minimum temperature for operations.

Not minor if: The annunciator was inoperable or the room temperature fell below 50 degrees.

**Example g. An operating procedure requires the shift supervisor to advise the station manager prior to making any mode changes. A mode change is made without this notification.**

The violation: The licensee is required to follow their procedures per Technical Specification 6.8.1, if applicable.

Minor because: This is a minor procedural error that had no impact on safety equipment and caused no safety consequences. All requirements for the mode change were met except this notification.

Not minor if: A mode change was made without all required equipment being operable.

**Example h. The NRC requires licensees to maintain the total effective dose equivalent (TEDE) to five rem per year. The licensee established by procedure an administrative limit of 2 rem per year. Radiation protection manager or general manager approval was required for any individual to exceed the procedural limit. Contrary to the licensee's program, a technician received 2.7 rem in one year without approval from the radiation safety officer.**

The violation: The licensee is required to follow their procedures per license conditions.

Minor because: This was an licensee administrative limit. The worker was within federal limits.

Not minor if: Multiple examples were identified of failures to satisfy station radiation protection procedures indicating a failure to maintain and implement programs to keep exposures as low as reasonably achievable.

### **3. Nonsignificant Dimensional, Time, Calculation, or Drawing Discrepancies**



**Example a. A temporary modification was installed on one of two redundant component cooling water system surge tanks to restore seismic qualification. The supporting calculations, which did not receive a second-level review, were found to contain technical errors that did not result in the train being inoperable.**

The violation: 10 CFR 50, Appendix B, Criterion III design control measures for verifying the adequacy of design were not implemented. Design changes are required to be subjected to design control measures commensurate with those applied to the original design.

Minor because: These are nonsignificant calculation errors. The calculation errors were minor and the installed modification restored seismic qualification of the tank.

Not minor if: The calculation errors were significant enough that the modification required revision or rework to correctly resolve seismic concerns.

**Example b. A controlled design drawing shows a plug valve where a ball valve is actually installed. This deficiency occurred because of an oversight by the licensee.**

The violation: The design is required to be correctly translated into drawings.

Minor because: This is a nonsignificant drawing deficiency.

Not minor if: Operation of the system was adversely affected by the difference in valves.

**Example c. A licensee procedure required that all valves specified on a locked valve list be indicated as locked on the plant drawings. Inspectors identified safety-related valves on the locked valve list that were not indicated as locked on the plant drawings. All valves on the locked valve list were properly positioned and locked, as determined by field verification.**

The violation: Activities were not performed in accordance with procedures.

Minor because: This is a nonsignificant drawing discrepancy. All valves required to be locked were locked and properly positioned.

Not minor if: More than one valve was in the required position, but not locked.

**Example d. The technical specification required a primary sample to be taken and analyzed within two hours of a power change in excess of 20 percent. The inspector found that the chemistry sample was taken and analyzed within 2 hours and 35 minutes after a recent power**

**increase from 60 to 85 percent. The sample was within specification requirements.**

The violation: The technical specification was violated.

Minor because: This is a failure to implement a requirement that has no safety impact. The sample delay was not significant.

Not minor if: The sample had not been conducted or was delayed to the extent that the sample results were not reliable.

**Example e. An inspector found that the radiological survey instruments were beyond the required calibration frequency. The instruments were actually in calibration tolerance (when later checked).**

The violation: The licensee is required to calibrate radiological survey instruments at specified intervals.

Minor because: This is a failure to calibrate the survey instruments that has no safety impact because the instruments were actually in tolerance.

Not minor if: The instruments were out of calibration tolerance, resulting in a lack of reasonable assurance that the surveys performed were representative of the actual radiological conditions.

**Example f. An inspector noted that the required radiation protection training for a worker was not completed as required.**

The violation: The licensee is required to provide radiation protection training to workers through their radiation protection program procedures.

Minor because: The periodic training was not yet performed, but the initial training had been performed and training had been scheduled. There was no actual consequence from the radioactive material shipments.

Not minor if: An actual consequence occurred that was attributed to the lack of training.

**Example g. During construction of a safety-related concrete wall, a licensee quality control inspector observed that an imbedded Richmond insert is cocked at an angle of 6 degrees. The specification required plus-or-minus 3 degrees. The licensee discovered that the worker who placed the insert failed to use a level as required. For reasons unknown, the condition report was closed without implementing corrective actions. Subsequent to this incident, the same worker mis-oriented three other inserts. All of the inserts were later abandoned in place.**

The violation: The condition adverse to quality was not corrected and it recurred.

Minor because: These mis-oriented inserts represent a failure to implement a corrective action that has no safety impact. It had no direct safety impact because the out-of-specification inserts were abandoned in place.

Not minor if: A safety-related attachment had been made to an out-of-specification insert and placed in service.

**Example h. The licensee's security fence is required to be 12 feet tall. The NRC discovers that, in one section, the fence is only 11 feet 10 ½ inches tall.**

The violation: A license condition requires that the licensee meet their Physical Security Plan, which states that the security fence is required to be 12 feet tall.

Minor because: This is not a significant dimensional discrepancy.

Not minor if: The fence was significantly shorter (e.g. 11 feet).

**Example i. The FSAR states the volume of the refueling water storage tank is 250,000 gallons. The actual volume is 248,000 gallons.**

The violation: The facility was not consistent with the FSAR.

Minor because: This is a nonsignificant dimensional discrepancy.

Not minor if: The accident analysis assumed 250,000 gallons of useable volume above the suction point and the actual volume required accident analysis calculations to be re-performed to assure the accident analysis requirements were met.

## 4. Insignificant Procedural Errors

**Example a. A scaffold erected between safety-related plant service water strainers was wedged tightly between the system piping. Licensee procedures required an engineering evaluation be performed for all scaffolding located above or near safety-related equipment. No engineering evaluation was performed to assess the seismic impact of the scaffold. A later engineering evaluation determined that there is no safety concern.**

The violation: 10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be performed in accordance with procedures.

Minor because: This is a procedural error that has no safety impact.

Not minor if: The licensee routinely failed to perform engineering evaluations on similar issues, or if the later evaluation determined that safety-related equipment was adversely affected.

**Example b. While performing a reactor protection procedure, an operator inadvertently operated the bypass switch which caused a single channel trip condition. The operator failed to follow the procedure and adequately self-check to ensure the right switch was manipulated.**

The violation: 10 CFR 50, Appendix B, Criterion V requires that activities be accomplished in accordance with procedures.

Minor because: This was an insignificant procedural error and there were no safety consequences.

Not minor if: The error caused a reactor trip or other transient.

**Example c. A valve motor operator was test wired for reading operating current during testing required by Generic Letter 89-10. The valve was successfully cycled, the data recorded and determined to be within the acceptable range, and the valve was returned to service. However, the ammeter used a 0-100 amp scale instead of a 0-10 amp scale as required by the procedure. Subsequent retest with the proper meter resulted in satisfactory amperage readings.**

The violation: The test procedure was not followed.

Minor because: This was a procedural error that had no impact on safety equipment. The mistake did not result in an actual equipment problem.

Not minor if:           The retest revealed that the data was actually outside of the acceptable range.

**Example d.** During a review of the lighting in the safety injection pump room, an inspector-identified that the lighting was less than FSAR design levels for operator action. The licensee informed the inspector that this condition was previously identified. However, the corrective action to increase the lighting was given a low priority and was not completed in the two years since initial identification. Interviews with operators revealed that some had difficulties conducting surveillance or emergency drills without the use of flashlights in the pump room.

The violation:           The licensee failed to take prompt corrective action for a condition adverse to quality.

Minor because:       This is a failure to implement a corrective action that has no safety impact. Operators are procedurally required to carry flashlights and had no problems functioning in this light condition as evidenced by the lack of operational errors due to poor lighting.

Not minor if:           The degraded lighting condition contributed to an operator error.

**Example e.** The inspector-identified a valve with a missing name-plate, a violation of plant procedures requiring that all equipment be labeled. Discussions with operators revealed that this condition had existed for several years, but because operators routinely referred to the plant drawings, even though the valve was routinely operated, the missing name-plate had no safety consequences.

The violation:           Plant procedures required that equipment be labeled.

Minor because:       This is a failure to meet procedural requirements that had no safety impact. The operators used the drawings and had no trouble identifying the valve location.

Not minor if:           Improper valve manipulation occurred due to the missing name-plate.

**Example f.** A small leak occurs on a welded connection in the diesel generator day tank causing a slow drip of fuel oil onto the floor in the diesel room. Maintenance used a sealant to temporarily repair the leak and wrote a work order for a permanent repair, which was scheduled for the next outage. Later, the seal failed and additional leakage occurred, which soaked a safety-related solenoid. The licensee subsequently determined that the wrong sealant was used in the temporary repair.

The violation: The licensee failed to adequately correct a condition adverse to quality.

Minor because: This is a failure to implement a corrective action that had no safety impact because the problem did not affect the operability of the diesel generator.

Not minor if: The damage to the solenoid affected diesel operability or caused a fire hazard.

**Example g. The reach rod for a safety-related valve was jammed and could not be used. However, the valve could be operated manually one level down. This condition existed for two years and, despite complaints from the operators, it was not fixed. The NRC inspector noted that this work-around cost about one minute in operator response time and recognized that manual manipulation of this valve was required by certain off-normal procedures. The valve was accessible during all these off-normal events.**

The violation: The licensee failed to identify and correct a condition adverse to quality as required by 10 CFR 50, Appendix B, Criterion XVI.

Minor because: This is a failure to implement a corrective action that had little to no safety impact. The valve could still be operated and the extra time requirement would not affect recovery operations.

Not minor if: There were occasions where access to the valve would be restricted for environmental reasons (heat, radiation, oxygen).

**Example h. An inspector discovered that 3 of 150 emergency response organization members who are on the duty roster in different functional areas were not current in their training. The licensee's emergency plan required that all members be trained annually.**

The violation: 10 CFR 50.54(q) requires that the licensee follow and maintain in effect emergency plans. The plan was not followed.

Minor because: There are others on the duty roster in each functional area whose qualifications are current.

Not minor if: Emergency response personnel qualification lapses are wide spread or occur in such a manner that positions cannot be staffed by qualified individuals.

**Example i. An inspector found out of calibration survey instruments or less than the required number of instruments in storage cabinets in emergency facilities.**

The violation: 10 CFR 50.54(q) requires that the licensee follow the emergency plan. The emergency plan requires that calibrated survey instrumentation at set quantities be available.

Minor because: There are other instruments readily available and the emergency preparedness procedures require the calibration to be verified prior to use.

Not minor if: The failure was wide spread or timely response of a function was compromised.

**Example j. An inspector found that the evaluation of the adequacy of emergency preparedness procedures in the annual audit was not in sufficient depth in one functional area. The licensee reviewed the areas not covered and found no problems.**

The violation: 10 CFR 50.54(t) requires that the audit be conducted and that it contain the evaluation of the adequacy of EP procedures.

Minor because: No problems were identified and the revisions of the procedures that were not audited addressed improvements identified in drills.

Not minor if: The procedures that were not evaluated were in a condition that would effect the licensee's response to an emergency.

**Example k. NRC Inspectors identified three ten-foot lengths of wood left from a scaffold disassembled the previous week, in the auxiliary feedwater pump room. The licensee had not completed an engineering evaluation approving this temporary storage location for transient combustible materials as required by the fire protection plan.**

The violation: These transient combustible materials were not reflected in the fire hazards analysis and the licensee failed to complete the required engineering evaluation.

Minor because: This is a failure to implement a fire protection plan requirement that has little or no safety impact. The licensee was able to show that the transient combustibles were well below the fire hazards analysis limits.

Not minor if: The fire loading was not within the fire hazard analysis limits.

**Example l. The technical specifications required that one-third of all safety-related molded case circuit breakers be tested each refueling outage (such that all are tested every three outages) and that the instantaneous trip currents be recorded for trending purposes. The NRC inspector found that two outages ago during testing, the**

**instantaneous trip current for a breaker was not tested. The last recorded trip current for this breaker was five outages ago. The subject breaker was subsequently found to be in specification.**

The violation: The technical specification is violated, because all required tests were not performed on the breaker within three outages.

Minor because: This is a failure to implement a procedural requirement that has no safety impact. All other tests on the breaker were satisfactory at the time of testing and the trip was subsequently found to be in specification.

Not minor if: The subject breaker was out of specification.

**Example m. The technical specifications require that 10 percent of all safety-related snubbers be tested each refueling outage and that if one failure occurs, an additional 10 percent sample be tested during the same outage. One snubber in the original population of 17 snubbers (there are a total of 168 snubbers) fails, necessitating an additional sample of 17 snubbers. However, because of an oversight by the licensee, the only 16 additional snubbers are tested with no failures.**

The violation: The technical specification was violated because the required number of snubbers were not tested.

Minor because: This is a failure to implement a procedural requirement that has no safety impact since none of the additional snubbers tested failed.

Not minor if: A failure had occurred in the additional sample, necessitating yet another expansion of the sample, and this was not accomplished.

**Example n. An inspector discovered a small pile of low level radioactive material in the radwaste building that was not properly posted. This problem occurred because of an oversight by the licensee.**

The violation: The material should be posted as per 10 CFR 20.1902.

Minor because: This is a small area with low level radioactive material and access was restricted by a fence around the area. Other areas were sufficiently posted.

Not minor if: Other areas were also not posted or the radioactive material presented an accessible hazard.

## **5. Work in Progress Findings**



**Example a. Prior to system restoration following a modification, the licensee determined that the modification package that replaced the spent fuel pool cooling system suction piping did not include the siphon hole called for by the original system design. The siphon hole was not installed. Due to the location of the piping, a siphoning event would lower spent fuel pool level below the point allowed in Technical Specifications but not to the point where fuel would have been uncovered.**

The violation: The pipe design was not correctly translated into work instructions and drawings.

Minor because: This was work in progress. The error was identified and corrected during turnover of the modification prior to system restoration.

Not minor if: The system was returned to service without installation of the siphon hole or completion of an evaluation to remove the requirement for the siphon hole.

**Example b. During installation of a modification, the licensee failed to follow the installation procedures and a check valve is installed backward. Quality control did not find the error. During a post-modification test, prior to returning the system to service, the licensee discovered the problem.**

The violation: The licensee failed to correctly translate the design to the as-built configuration.

Minor because: It is work in progress and there is no safety consequences.

Not minor if: The system was returned to service.

**Example c. A solenoid that did not meet the specification was screened through receipt inspection and placed in the warehouse. When the solenoid was withdrawn to be installed, an electrician noted that it was not the correct type.**

The violation: The licensee is supposed to establish controls to prevent nonconforming parts from being used inadvertently and the wrong part could have been installed.

Minor because: It was work in progress and no adverse consequences resulted.

Not minor if: The valve was installed and the system returned to service.

## **6. ALARA Planning or Work Controls Issues**

**Example a** While reviewing the ALARA planning packages for the previous outage, the inspector finds that the actual collective dose received to complete a work activity (i.e., hanging temporary shielding to support ISI work) was 12.5 person-rem as opposed to the 10 person-rem estimated in the planning process.

The issue: The dose that the licensee determined was ALARA for this work activity was not achieved.

Minor because: The actual dose achieved did not exceed the planned, intended dose (i.e., estimated collective dose planned for) by more than 50%. This 50% criteria represents the NRC's expectation of reasonably achievable precision in the ALARA planning process.

Not minor if: The planned, intended collective dose for this work activity is unjustifiably higher than industry norms, or the licensee's past experience, for this (or similar) work activity.

**Example b.** While reviewing the collective dose results for work activities completed in the previous refueling outage, the inspector finds a work activity where the actual collective exceeds the planned, intended dose by 50% but is not greater than five person-rem

The issue: The dose that the licensee determined was ALARA for this work activity was not achieved.

Minor because: Although the resulting dose is outside the expectation for ALARA planning precision, a five person-rem work activity is not a significant contribution to the overall ALARA performance.

Not minor if: If several such issues are identified and it appears that the licensee has arbitrarily divided up the radiological work into very small "work activities" for the purpose of avoiding inspection findings.